

**AHRQ Quality Indicator Software Version 4.1
Additional Details Webinar
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Facilitators:

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John Bott [AHRQ]: Welcome to today's webinar. I'd like to repeat the objectives for this webinar series, as noted before. The objective here is for this version of the AHRQ Quality Indicators Version 4.1, the current version; we want to be very transparent with the methodology that's employed for the measures. We also want to transfer knowledge to take what we know and share it with people — and what we've recently learned in this measurement work, to share that as well.

With that we've launched this webinar series, which began earlier this month. Those sessions two weeks ago that occurred, we did a 50,000-foot webinar to go over a number of the areas related to the AHRQ Version 4.1 Quality Indicators at a very high level, with the understanding that that may be sufficient for some people.

This webinar series as it continues this week — we'll review the agenda in just a moment — is to provide people with a bit more information on a number of key topics. We'll review that agenda in just a minute here. The webinar series will continue beginning later this spring to go through in-depth a number of additional topics on the AHRQ Quality Indicators, Version 4.1.

Just to note the slides for today, if people are having a hard time accessing the webinar feature, it can be accessed on the AHRQ quality indicators website. They're posted there for you to follow along if you're having a hard time getting them otherwise.

So with that, the agenda today is to cover basically four topics. You'll see here, first tracking the indicators to talk a bit about how they've changed since the last version — some were added; some were deleted; some have been renamed. We'll walk you through that.

Secondly, incorporating new data elements such as present on admission and how that's addressed in this Version 4.1. Thirdly, incorporating new codes as they come up, and moving

to the third slide. And then also incorporating new data elements, such as using a reference database that's one-year versus the three as we did in the past.

Then after we walk through that agenda — those topics — we'll let the operator know that we'll take some time for questions. You'll have the opportunity to phone in questions, to ask them verbally or to type your questions in online.

The webinar that occurs two days from now on the 27th, to let people know just to be clear, it will be a repeat of this agenda. We're offering the same agenda twice in order to maximize the likelihood that people can participate.

So now to move into the bulk of the discussion today, the presentation portion, I'll turn it over to Jeffrey Geppert, who is the AHRQ Quality Indicators Project Director at Battelle. Jeff?

Jeff Geppert [Battelle]: Thank you, John. Good morning and afternoon, everybody. Let's get started. Again, what we're going to do today is we're going to focus on four of the topics that we touched on briefly during the session a couple of weeks ago. We're just going to go a little bit slower and into a little bit more detail on those topics and look at some of the documentation that's on the website and point out where people can find different things, and then be available for questions at the end for any clarification questions.

We're also going to start to lay the groundwork for some of our more in-depth discussions that we're going to be having in the coming months — starting with the POA. Today we're going to touch in a little bit more detail about how the POA data are used in the indicator definition, and then the next time we'll focus more on how the POA data are incorporated into the model.

Let's start with our first topic, which is the tracking of the indicators. As we mentioned in the overview, there were a number of indicators that were added to the AHRQ QI set in Version 4.1; indicators that were deleted and renamed, and otherwise altered significantly.

For the first one, the neonatal quality indicators, we mentioned that there were two new indicators that make up this neonatal quality indicator set — which is really a subset of the pediatric quality indicators, but we’ve distinguished them by giving them a different name. So we have NQI #2, NQI #3 for neonatal mortality and bloodstream infection neonates.

The thing that I want to point out specifically here is how neonate is defined. The definition of neonate is included in the TDI and NQI technical specifications which are available on the website. In particular there is a document that’s called “TDI appendices,” and in that document there is an Appendix I, which includes all of the definitions related to these neonatal concepts.

For example, there is a definition of what we consider a neonate. And then within neonate a subset of that is what we consider a newborn, and then a subset of newborns is whether we call them a normal newborn, and then a further refinement of newborn as to whether we consider them an outborn or an inborn — an outborn being someone born outside of the hospital of interest and inborn being born in the hospital of interest.

So the thing that I want to make sure that everyone understands is that we define a neonate as any discharge with age and days at admission between zero and 28 days, and then there is some alternative logic that applies if the age and days is missing — but it’s not missing very often.

What I want to highlight about that definition is that we define the denominator in that way so any discharge with age and days at admission between zero and 28 days, but we don’t restrict the numerator to have occurred within that 28-day time period.

Similarly, we don’t restrict the mortality to have occurred within that 28-day period. It’s possible that a neonate would be admitted in that 28-day time period, but the death or the

bloodstream infection would occur outside of that window. So that's an important conceptual point, and I just want to make sure that everyone understands that.

The next group of indicators are measures that are deleted, that were deleted from Version 4.1. I just want to return to this topic to provide a little bit more detail, specifically related to complications of anesthesia. We've mentioned four sort of theoretical concerns related to this particular measure that led to the exclusion of the measure from the patient safety module. One was its reliance on e-codes, and the fact that with e-codes the reporting of e-codes vary state to state. Not every state reports them and states report varying numbers of them.

And the fact that this particular indicator, that kind of a function of that was particularly sensitive to the number of diagnosis codes that were reported. And then finally, most importantly, the official ICD-9 coding and reporting guidelines differ for e-codes versus other kinds of ICD-9 codes — and specifically for most ICD-9 codes they're only reported if the condition was unexpected or changed the diagnosis or treatment of patient, whereas e-code does not have that requirement.

So all of our own analyses, and analyses that have been done by others, found that this particular indicator picked up a number of relatively minor outcomes that were not sort of the intended outcomes that were intended to be captured by the measure.

So the point that I want to make here is that a lot of those theoretical concerns, you know, apply to other measures like accidental puncture, for example, has e-codes that are used in the numerator definition, but it's a matter of degree. Anesthesia is really the only QI that really exclusively relied on e-codes for the identification of the numerator. For example, in some analysis based on the nationwide inpatient sample there are about 1,400 cases that are identified in the numerator of this measure — fewer than ten of which would be identified without e-codes — and that ratio is unique to this particular indicator, which makes it particularly susceptible to this variation in the way that e-codes are reported.

Obviously, the e-code issue is something that users need to be aware of — whether you're in a state that reports e-codes or not, or in your own use of the measures whether you're using e-codes or not. But for the other measures what is typically the case is that numerator events are identified by both an e-code and some other diagnosis codes, so there is a bit of a duplication or a replication in the identification of the events — which further mitigates sort of the impact of e-code reporting for the other QIs. I just wanted to emphasize that and emphasize sort of the uniqueness of this particular measure with regard to those issues.

And then as we've mentioned in our earlier presentation, really the issue of OB trauma is just that the measure was redefined to harmonize with the existing Joint Commission version of this measure, and the diagnosis codes that were the focus of the numerator really do not apply to C-sections and so that's why that measure was dropped.

[00:15:00]

So then moving on to the indicators that were renamed, and there are two that we're focusing on: PSI 3, which used to be called decubitus ulcer and now it's called "pressure ulcer." I just want to focus on that one for a minute just to make sure that everyone understands exactly how this change was implemented.

Not only was the measure renamed, the reason for the rename was because of some new codes that became available to identify stage, so I'm going to flip just for a minute away from the slides just to look at the technical specification for this measure.

For those of you who don't have the Live Meeting in front of you, you can look at the technical specifications that are on the website. It's a little bit awkward to look at it in this way. I'm just looking to see if there's an easy way to rotate it 90 degrees. Apparently not.

Well, the point that I want to make about this is that there are two potential ways that these codes could have been implemented in this particular measure. So the idea was that we have

new codes for staging, and so they distinguish between Stage 1, Stage 2, Stage 3 and Stage 4. We wanted to be able to remove the lower stage diagnoses, Stage 1 and Stage 2 from the indicator definition. So the way that we actually implemented this was to adopt an exclusion, whereas we retained the existing numerator definition, which is based on the 707 codes — which are all based on sight.

And then we excluded cases that had a diagnosis code of pressure ulcer Stage 1 or Stage 2, and also actually not otherwise specified.

So the reason we did it this way is so users could apply the same specification and software on older data that did not have the staging coding. And then more recent data, and then the results when they applied this software to more recent data these cases would be excluded from the denominator.

An alternative way to implement this measure would have been to have sort of date-conditional coding where one set of codes that was based on sight applied before the adoption of these codes and another definition based on stage applied after these staging codes were implemented.

So that is something, as I mentioned before, we're going to continue to look and refine this measure. Once data that actually uses these stage codes becomes available, that's one of the things that we'll need to look at is once the data becomes available, whether there's an alternative way to define this measure that uses date-specific coding. That's one of the things that we'll be looking at over the next year or so.

Okay, the other indicator that was not only renamed, but greatly affected by a coding change was the selected infection due to medical care measure, PSI 7. That was the previous name and the new name is now “central venous catheter-related bloodstream infections.”

Here the issue is that the previous definition relied on two codes. One of the codes was 996.62, which is an infection due to other vascular device implant and graft. And then the second code, 99.3, which was other infection. That was the way that this indicator was defined for discharges prior to October 1, 2007.

Effective October 1, 2007, there was the introduction of a new code which was 999.31, infection due to central venous catheter. This code had a lot of advantages. It was much more specific than the previous coding and much more in tune sort of with other related infection measures, and so we both renamed and redefined this measure to drop the earlier two codes and adopt this new code, 999.31.

So the way that the software is operationalized is that it uses the previous definition for discharges up until October 1, 2007. And then after October 1, 2007, it adopts the new definition. The sort of empirical consequence of this is if you were to track sort of your discharges over time is that, you know, note that the new code is derived out of one of the previous codes. So the 999.31 is derived out of the 999.3 as the subset of those cases for the most part.

So what we would expect to see is sort of a drop in the number of cases that are being applied by this measure. In fact, what we do see in the reference population which is the 2007 stayed inpatient databases, we see about 10,000 cases a quarter being flagged under the old definition — and then about 5,000 cases being flagged under the new definition — so there's a drop of about 50 percent in the number of cases.

So now just like pressure ulcers, there's an alternative way that this might have been done and that was rather than using the older definition before for cases before October 1, 2007, we could have restricted to just the 999.3 cases — since that is basically a little bit closer to what the new definition is than the previous definition. But we didn't do it that way just because that definition — that 999.3 was not in fact an RQI definition. That wasn't the way that that

measure was defined previous to this date, so we retained sort of the official QI definition and then implemented a definitional change.

But for your own tracking of cases, you just need to be aware that you'll see a larger drop in the number of cases flagged than you would have seen if you just focused on the 999.3 cases before October 1, 2007.

And then just moving on with this theme of tracking the indicators, so we have indicators that were renamed and moved. We have one example from the pediatric quality indicators. It was renamed, and that was that it went from PDI #4, iatrogenic pneumothorax in neonates to NQI #1, in the neonatal quality indicators module. So it was both renamed in terms of the numbering convention, and moved to a subset of the PDI module.

I also want to clarify this one other topic that we touched on last time. There are a couple of measures that were moved in the SAS module from the patient safety indicators or the prevention quality indicators to the pediatric QI SAS module, and so that's PSI #17 birth trauma; PQI #9 low birth weight.

Again, both of these measures are based on pediatric discharges, and so it made sense from a processing perspective to have those indicators defined in the pediatric SAS module. However, this only applies to SAS in the sense that if you're a user of the Windows software, the modules are organized into tabs that one can select on and the modules still are reported into their preexisting tab, so they haven't logically changed modules which is the matter of processing the SAS.

So finally on this tracking of the indicators theme, one other indicator that we wanted to just highlight because it had been materially redefined in Version 4.1, and that was esophageal resection volume and mortality part of the inpatient quality indicator set.

The new code that was added to the denominator for the mortality measure or for the volume measure was 43.99. This measure was added because there were a couple of articles that were being published that highlighted that some of the cases that we were in fact interested in identifying in this measure were being coded using this code 43.99, other total gastrectomy.

In terms of the magnitude of the change, you know, whereas under the old definition there were approximately 4,000 cases being identified, and under the new definition it's about a 20 percent increase in that number. It's a fairly significant refinement of that measure that people should be aware of, if they notice a change in their volume or the numerator of their mortality measure. We've already kind of covered the material refinement for the PSIs.

So for the new data elements, the two data elements that were added to Version 4.1 that are new data almost had a significant impact on the ways that the measures are defined; are they present at admission and the point of origin.

So I just wanted to go over this again and talk a little bit more about how the POA coding is implemented in the 4.1 module. If you look at the UB-04 and the coding of this particular data element, it's form locator 67, FL 67. You'll see that this data element has five defined values. It's a character field and so yes, being present on admission; no, not present on admission; Y, unknown or not documented; W, clinically undetermined, and E is exempt.

We've highlighted in yellow sort of how we've mapped this data element in the QI software, because essentially what we're interested in is determining whether a particular diagnosis code is present on admission or not — sort of a binary yes or no.

So we include anything that's highlighted here in yellow which is the Y, present on admission; W, the clinically undetermined and the exempt is all being present on admission and then N and U as being not present on admission, or U, unknown/not documented is also being not present on admission. So this coding or acceptance of this coding and the mapping of this coding is a new feature of Version 4.1.

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Let me just see if this is an example, and I'll just ask you to read this a little awkwardly. But it's not that much information, and so it's not that hard to do. So for those of you who have sort of run the SAS code and have looked at the data, you'll notice some additional data elements that are generated by the code. We've always used a set of data elements that began with "T" to identify cases that are flagged in the numerator and then the denominator, so T equals zero or one, if it's in the denominator and T is equal to one if it's in the numerator.

And then we have a new variable that's outputted by the code that begins with a "Q," and this is our POA flag. This example is for one of the measures, iatrogenic pneumothorax. It's a crosswalk between the P flag — which is for the numerator and the denominator — and the Q flag which is our POA flag. So the T variable is in the rows where you have a zero and a one in the rows, and the Q flag is in the columns zero and one.

So for this particular case, there are about 21 million observations in the denominator, but 7 million of which have POA data defined. You'll see that there are about 7,500, 7,600 cases that are flagged in the data that doesn't have POA, and that's a rate of about .52 per thousand. And then in the data that's with POA, you have about 2,761 of those cases being not present on admission, and about 1,205 of those cases being present on admission.

You can do a similar kind of analysis with your own data using a crosswalk between T and Q, these two flagged variables to identify which one of your cases were flagged using the numerator specification for the measure, and then of those cases which ones were identified as being present on admission. The way that they're flagged as being present on admission is by looking at each diagnosis flagged — one diagnosis code at a time.

So underneath this you'll see sort of a couple of examples of how this is done. In both of these cases, the code of interest which is the 512.1, the iatrogenic pneumothorax code, and in

the first case this would be flagged in the numerator so this would be given a T-value of one. Then we would look at the DX QOA codes, and for that fourth diagnosis code it would say that it's not present on admission. So it would be given a Q-flag of a zero.

In the second example, the fifth diagnosis code has our diagnosis code of interest as 512.1, but the DX code for that particular case is flagged as yes, it was present on admission. That would be given a Q-value of one.

So what we'll be looking at in our next session is going to be how the risk adjustment model incorporates this information, and how if this DX POA data is not available, how the model includes that into the prediction.

In this next example, I want to emphasize sort of how the POA data is used in the identification of the comorbidities. So what this is, this is a crosswalk between the risk of mortality class for the cases in the denominator of AMI mortality. In the rows it has the risk of mortality subclass defined without incorporating the POA information. In the columns it has the risk of mortality subclass defined using the POA information.

What I want to highlight here is that most of the columns sort of fall along the diagonal where using POA data doesn't change what risk and mortality subclass they're in; but there are a few classes that fall beneath the diagonal, which would indicate that the risk of mortality subclass is less severe when the POA data is incorporated than it would have been if the POA data was not incorporated.

So that makes sense, because the POA data is going to identify complications that occurred during the hospital stay — and previously those would have been considered to be comorbidities. But because we have the POA information, we can identify them as actual complications and not as comorbidities, and so they would lower the patient's risk of mortality as determined at the time of admission.

You can see that the change is more dramatic for the higher levels of risk to mortality, “extreme and major,” than it is at the lower levels. There are a few trivial cases where the opposite actually occurs, and the subclass actually increases but those are pretty limited.

The next data element that has a fairly significant impact on measures is point of origin, which in the UB-04 is FL 15. What I wanted to highlight here was two facts. One was that, as I mentioned before, point of origin although it replaces admission source in the UB-04, not all states collect on point of origin. Some states still collect admission source, and so the software accepts both admission source and point of origin as valid input data elements.

So point of origin has a recode that is conditioned on whether the condition type is newborn or not. A-source also has this same recode, but it’s defined a little bit differently. So for point of origin the values that we care about mostly — the values that we use — are the transfer values. There are other values that are coded on point on origin, but we only are really concerned with the values 4, 5 and 6 because those identify transfers from a hospital, transfers from an NSF or transfers from another healthcare facility.

The A-source equivalents are of those that are A-source 2 and A-source 3. A-source 2 is essentially equivalent to 4 on the point of origin, and A-source 3 is essentially equivalent to 5 and 6.

Now, when the admission type is newborn in the SID data, the admission type value of 4 is how to identify newborns. Then these point of origin values take on a different meaning. Four is not used as a value admission type newborn; five means that this patient was born inside this hospital, and six means that this patient was born outside of this hospital.

So in looking at the specifications and in looking at the syntax, you’ll notice that often the logic related to point of origin or admission source makes reference to admission type, and this is why. It’s because the point of origin variable has this recode when the admission type is newborn.

So incorporating new codes, obviously one of the big changes in 4.1 was the inclusion of ICD-9 codes that went into effect on October 1, 2009. I won't go over them in detail, but just to highlight that all of the FY '09 codes that were implemented in this new version are on the website under each of the module pages under ICD-9 coding changes for this fiscal year. At this time if there are any particular coding changes that you have a question about, please let us know.

The MS-DRG, I do want to emphasize with regard to that that even though the software will accept both the CMS-DRG Version 24 and before, and the MS-DRG which is Version 25 and now — Version 24 is not the current version. It's not the version that CMS is actively maintaining.

So if you do run the software using Version 24, the discharges after October 1, 2007, you just have to be aware that those codes aren't technically valid. We allowed the software, you know, to use them, because we did hear from many users that for certain pairs they weren't migrating to the MS-DRG. They were still using the older version — to what extent that's true today I'm not sure — but users just need to be aware that the current version that CMS is supporting is now Version 26, which is the version that's implemented in our QI software. Then we'll be converting, you know, moving forward with Version 27 in the next release.

[00:45:00]

At the extent of trying your patience, I just wanted to do one more example of CMS-DRG to MS-DRG conversion, because this is kind of a topic of some confusion for many users in terms of how the CMS-DRGs and MS-DRGs are related to one another in the software. This is just one example of how the mapping works in the QI software.

So this is CMS-DRG's Version 24-146, 147, which has to do with rectal resections, and then DRGs 150 and 151. So in the old Version 24, you often had DRGs that were divided between *with* complications in comorbidities and *without* complications in comorbidities.

And then in the new MS-DRG, they broke that into three categories with a distinction in the comorbidities and complication categories. So what we've done in this version of the software is to maintain sort of a logically consistent mapping between Version 24 and Version 25 of the MS-DRGs, and then group all of them into a single category which we call the "modified" DRG, or the MDRG category, which for this first example is 0603, and for the other example it's 0604.

I wanted to just highlight sort of the numbering convention here. The first two characters in this MDRG data element is the MDC, and then 03 is just a sequence number — 03, 04 is the sequence number of these modified DRGs within these categories.

So people are often a little confused, because they'll look at the software and they won't recognize this DRG coding system — 0603, 0604. I just wanted to emphasize that this is a mapping of the CMS-DRG and MS-DRG into our own broad categories that combine the with/without complications in comorbidity.

And then we use this in all of our risk adjustment models to define the covariates to risk adjust for, and so if you have any questions about sort of how that mapping is done please let us know.

I mentioned in our overview session that we've become more active in trying to propose changing to the ICD-9 coding system, and so I just wanted to give you some specific examples of this coding change that we've proposed and has been adopted in ICD-9 codes.

Some are specific ones kind of related to existing measures like the disruption of postoperative wounds but the diagnosis code — our current measure really focuses and it

relies on procedure codes. So that has the potential of making that measure much more sensitive than it is able to be now.

Deep vein thrombosis, which we've talked about last time, allows us to distinguish between deep and peripheral thromboses and also acute and chronic, and so again improving the sensitivity and specificity of the measures.

Finally, one of the major changes related to Version 4.1 was the adoption of a new reference, a one-year reference population. In Version 4.1 it uses the 2007 stayed inpatient data. One of the implications of this is that although it has the benefit of being more current than the Version 3.2 reference population which is a three-year rolling population, it has the benefit of being more current and it also incorporates a lot of the coding changes that we've been discussing. It does have the disadvantage of having fewer cases to use in the development of the risk adjustment model, but I just wanted to highlight that.

In general, for the adult population that is not of particular concern, the adult database has about 27 million discharges, which is more than adequate for identifying significant covariates — except for the most infrequent of covariates.

For the pediatric module, there are about 5.5 million pediatric discharges in the 2007 data. Because the patient safety measures for pediatrics are relatively infrequent, it does have the result that we can identify fewer covariates than we might have otherwise if we had used a full data source.

You'll notice in many of the risk adjustment models that the previous models had a more parsimonious set of risk factors than they did in the previous version. In general, it doesn't have a really large impact because the pediatric model — you know, the risk adjustment module is relatively less materially important than in the adult population. But it does have some impact, and so it's something that we'll be looking at in the years to come.

I did want to highlight sort of what we're using as a definition of pediatrics, which is based on ages less than 18, but also MDC now down to 14, which is the pregnancy and delivery DRGs. So we do include those cases in our adult definition, the pregnancy admissions.

Finally, I just wanted to make people aware of what the potential implications might be of applying the software to your own population of interest. So if the population that you're applying the software to is basically a subset of the population that we built the software for — the 2007 SID or serve a representative subset of them — then all of the benchmarking and all of the risk adjustment models will be appropriately calibrated.

But what you might notice if you applied the software to a population of interest that is different than the reference population, then you might start to notice some differences. In particular, you might start to notice that the overall observed or expected ratio — or the average observed or expected ratio for hospitals in your dataset — might be slightly greater than one or slightly less than one.

The magnitude of that impact will vary depending on how far your population of interest deviates from the reference population; for example, you might be applying the software to more recent years or the past year and there may have been an overall trend in the indicator so that the observe rate and the data that you're using might be higher or lower than it is in the reference population. That will impact the calibration and impact the OE.

You might be looking at a particularly different, a special population of patients; you might be looking at Medicaid only; you might be looking at managed care only; a fee-for-service only. You want to be aware of sort of what the overall population observe rate is for that subset relative to the benchmarks that are incorporated into the AHRQ reference population.

Similarly, you might be looking at a particular subset of hospitals which might be particularly important for the pediatric module; for example, where the RQI reference population includes both community and children's hospitals. If you just run it on children's hospitals even with

sort of the risk adjustment model at the time for observable case mix, there might be some systematic differences in those two populations that would affect the calibration of the measures. I just want you to be aware of that and to incorporate that into whatever analysis you're doing and to please let us know if you have any questions about how to sort of interpret the results that you're seeing.

Okay, at this point I'll turn it back over to John to talk about some of the selected topics.

John Bott [AHRQ]: Okay, thanks Jeff. One note to presenters, their lines are not automatically suppressed so we're getting some background noise perhaps from other folks who have dialed in as presenters, so if I could ask folks who are in the presenter mode to hit "mute" until they want to talk, that would be great.

So in just a moment we'll get to the draft list. We'll get to your questions in just a moment, but we want to hit on these next couple of slides. In this particular slide we talk about what we started with at the top of this call; noting that this is a webinar series. What you see here in this slide is a number of topics that were so far on our short list of topics to discuss in this series of webinars on Version 4.1 and 2010.

One, of course, is to go into more detail on the risk adjustment model. There are a number of aspects of that. Using the AHRQ QI composites; area-level RQIs, which we've only very peripherally touched on today, and then also related topics as they become germane to the time. CMS will be using a number of the AHRQ quality indicators, for example, and that's timely to make sure that we share such information with you in the future.

Of course, this is just a starter set list. If you have ideas for topics that you would like covered, please let us know in the Question & Answer session here, or through the support line.

Moving to the next slide, we always provide this slide just to let you know the place for additional resources and for information on the AHRQ quality indicators, and so just to include that. And then this is the point if you have any questions, please queue up. I'll turn it over to our operator at this time to again tell you how to verbally ask a question or to type in a question.

[Operator]: Okay, thank you. We will now begin the Question & Answer session of today's conference. If you would like to ask a question verbally, you may press "*1." Please make sure you unmute your phone and record your name clearly when prompted so that I may introduce your question. If you'd like to retract your question, you may press "*2." Once again, if you would like to type your question, you may do so by clicking the "Q&A" icon at the top of your screen; typing in your question and clicking "ask." To retract your question, you may click the "X." We'll just wait a few moments and see if there are any questions at this time.

John Bott [AHRQ]: Okay, we did get one question typed in midway through the presentation portion, and so we'll start with that while people are taking an opportunity to type in their questions or to raise their hand.

The question is the observed numerator total for some indicators from PS-SAS P2 do not match the actual number of patients flagged in program PS-SAS 1. Since the observe rates are the raw rates, I would expect each discharge flagged with a one to be included in the numerator count. There are some discharges flagged with a "1" that are not included in the numerator total for indicators 3, 10, 12, 15. Jeff, do you want to respond to that question?

Jeff Geppert [Battelle]: Sure. In the P2 program, P1 is the one that flags the individual-level discharges and it flags a discharge regardless of whether POA data are available or not. It will flag a zero or a one if it's in the denominator and a one if it's in the numerator.

[01:00:00]

Now, the P2 programs compute the observed rate. The way that the programs work now is it will compute the observed rate based on the availability of the POA data. If the discharge dataset has the POA data, then it will drop from the numerator and the denominator for any case that has been flagged as being POA.

So the observe rates that come out of the P2 program will be a little bit different — or the rates may be higher or lower — but the numerator will be lower as they come out of the P2 program because those cases that were flagged as being POA have been excluded.

So you actually have two sort of observe rates that you need to be aware of. There are sort of observe rates before POA that is taken into account, and observe rates after POA is taken into account. The P1 program will provide you with the observe rates when the POA is not taken into account, and then the P2 program will give you the observe rate when POA is taken into account.

John Bott [AHRQ]: Thanks for that question to the person who typed that in. There is another typed in question asking when is the anticipated date for the presentation of the POA webinar. So we've been saying this spring, and so I'll say optimistically March. If we don't make that, then it would hopefully be shortly thereafter in April, but we're hoping to have that ready for a webinar for March. At this time I'll ask the operator if we have any verbal questions at this time. Operator?

[Operator]: There are no questions in the queue at this time.

John Bott [AHRQ]: Okay, there is another typed in question. The changes you have just reviewed relate to Version 4.1 for SAS, will the Windows version have the same changes, and then secondly, when will 4.1 for Windows be available?

Jeff Geppert [Battelle]: The answer to the first question is yes. All of the changes that we've just discussed have also been incorporated into the Windows version. The biggest distinction is that in the Windows version, you know, you just have numerator counts, denominator counts and rates — whereas the SAS has all of these different flags that are set.

All of those flags are set in Windows and incorporated into the Windows logic, but essentially is reported as the outcome of all of that logic which is the numerator counts, the denominator counts and rates. It's a little bit easier to do analysis on your data using the SAS version, but the results and the logic and stuff are all identical.

In terms of the availability of the Windows software, it's going to be sort of released along with this new software product that AHRQ is developing known as MONAHRQ, and so it's just undergoing kind of the final stages of that release process. We anticipate that the release will occur shortly, in a matter of a few weeks.

John Bott [AHRQ]: Thank you for that question to the person who asked that. So another typed in question came in. It is in regards to those of us who will consider analyzing 2009 SID data, state inpatient data, early this spring. Is there a predicted time point when the Version 4.1 software will be revised or updated to include calendar year — I think the person meant fiscal year — ICD-9 and MS-DRG codes? Jeff, do you want to take that question?

Jeff Geppert [Battelle]: Right. So we are planning a released update for all of the ICD-9 and DRG coding into fiscal year 2010. Our intention is to have that available in the spring for when the 2009 data are becoming available in the first quarter of 2010. We anticipate that that will happen early in the spring of 2010 and we'll have a coding update release.

John Bott [AHRQ]: Okay, thank you for that question. I'll call upon the operator again to see if any verbal questions have queued up.

[Operator]: There are no verbal questions at this time.

John Bott [AHRQ]: Okay, we have another question typed in. The person asks where can I find further information on the calculation of the expected rates, aside from the brief paragraph in the AHRQ quality indicators manual. Jeff?

Jeff Geppert [Battelle]: We're in the midst of preparing sort of a technical description of the computation of the expected rate which we anticipate posting shortly. It's obviously much more complicated than the calculation of the expected rate in Version 3.2, which was really just where you could actually do it in Excel. I mean, it was just sort of a linear combination of the covariates that were published in the tables and then the flags that were defined in the software is just a zero or a one.

And then what you would do is you would just, you know, for each covariate multiply the coefficient times that zero or one flag on the discharge record. You would take a sum of that and then do a conversion, and then you would get a predicted value for each discharge. And then at the hospital level the expected rate was just the mean predicted value for all of the discharges for that hospital. It's really a pretty straightforward calculation from the software.

Conceptually, Version 4.1 works the same; it still calculates sort of a predicted rate for each discharge level, and then the expected rate is just the mean of that at the hospital level. But the difference is what goes into that predicted value at that discharge level uses a more complicated methodology.

The technical document will describe the methodology in detail, and then we'll have it sort of from a mathematical perspective. We'll have companion documents that kind of walk through the calculations a little bit more intuitively so that people understand what it's doing, but that will really be sort of one of the topics that we're going to focus on in this first webinar just because you do need to kind of walk through the calculation step-by-step to make sure that it's understandable to folks. We'll be producing the documentation kind of in conjunction to that.

John Bott [AHRQ]: Thank you for your question. Another question typed in the person asks that in P3 for risk adjustment there are GEE-related files and executable files. Can we easily change the location where they are to be implemented other than the default in the field typed “slash” length in the files? Jeff?

Jeff Geppert [Battelle]: Yes, you can. The default location for those parameter files is like on the C-drive, CRQI and then it has like IQI or PDI or PSI depending on the module, and then a folder called “AHRQ prediction” for the executable. That’s the default location, but you can store those in a different location, a different directory.

The place where those directories are referred, let me bring it up here so that I can give you some more specific guidance within a series. It’s in a file that comes loaded with the software; it’s a text file. It has those path names coded in them. So if you change the path names in that text file, then you can change the location of these parameter files. In the module there’s a text file called “PRD” for the IQIs, and then it goes IQ P41 for the other modules. It’s like PRD-TDT 41 and for the patient safety it’s PRD-PSP 41. These text files have the actual module call, and they refer to the CRQI directory. You can edit that directory reference in those text files to wherever you want and store those data wherever you want on your system.

John Bott [AHRQ]: Thank you for that question. We have another typed in question. The person asks that you indicated on a slide that quote, unquote “E” indicated that the diagnosis code was exempt; however, I thought that a value of a one was mandated for CMS as exempt. Did I miss this change? Jeff?

Jeff Geppert [Battelle]: I think that is how it was originally specified; however, the thought was that “1” was too ambiguous so typically those values have been coded with the E, because the “1,” given the earlier incarnations of the present on admission, “1” meant not —

you know, “1” meant present on admission, and zero meant present on admission. The coding of “1” was changed to “E” to resolve this ambiguity.

John Bott [AHRQ]: Thank you for that question. I’ll again ask the operator if there are any verbal questions queued up. Operator?

[Operator]: Yes, we do have one question. It comes from Greg. Your line is open.

[Panelist]: Okay, I had a question about the composites. I was wondering how the values were calculated and the arrays used for the composites, and also how the weights were calculated and if there would be anything about that in the upcoming documentation for the composite.

Jeff Geppert [Battelle]: Could you please repeat the first part of your question?

[Panelist]: Okay, so in the composite program there are two arrays — well, actually there are three arrays that are used. For two of them I don’t know like how the values were created? Then there’s also another array where actually in the program there is the values, the weights to type out manually. I was wondering how all of those values were computed, or if like that would be in the upcoming documentation for the new composite program.

Jeff Geppert [Battelle]: Yes, there is some existing documentation, sort of the technical reports that describe the indicator development methodology that came out of the AHRQ QI composite workgroups. And then there is an NQF report that talks about the weighting for each one of the composites, but what we are doing is sort of synthesizing and updating these documents and making it a little bit clearer to folks where these numbers are coming from.

In short, in the composite programs there is an array called “P3” which is just a population rate, and so it’s the population rate from the SID. Then there is array one, and then in the IQI there’s also an array three —

[Panelist]: What about the array one? Is that the same thing, population rates?

Jeff Geppert [Battelle]: No, those are some reliability weights that are used in the computation of the composite confidence interval. Those are just parameters that are just computed from the SID that are used in the computation of those values. Basically, they reflect sort of how much variability there is in the composite or in the components of the composites in the SID data. And then there are a couple of other arrays, like array 10 and array 11 that just have some index values for indexing the arrays.

[Panelist]: So is there somewhere where it says — where are the documents that I get for like the weights, for example?

Jeff Geppert [Battelle]: Yes, if you go on the QI website and if you can't find it, just let us know and we'll help you find it. There is a workgroup technical report that talks about how those reliability weights are computed and they give some formulas for that.

[Panelist]: On the QI website?

Jeff Geppert [Battelle]: Yes, <http://qualityindicators.ahrq.gov>.

John Bott [AHRQ]: Thank you for that question. So we have another typed in question that we'll go to here. The question is my output three has an R code for risk-adjusted rates for PSI 18 and 19, which are the two OB trauma measures, but I currently understand that these are no longer risk adjusted. Should these be just observed rates now? Correct? If yes, will this R output be deleted in future releases?

Jeff Geppert [Battelle]: Yes, we kept the R just sort of to maintain the consistency in the software output, but you're right; in effect, the R is equal to the O because so the risk adjusted

is equal to the observed. The reason for that is because the E, the expected is equal to the population rate and so those two cancel out.

The reason that we're retaining them is that we are planning to revise and refine those risk adjustment methodologies. We talked a little bit last time about how there are some potentially important patient level risk factors that ought to be included in those models, but the current implementation of those models just really incorporated some basic demographic information. Those are retained kind of for future use, but they need to be interpreted appropriately.

John Bott [AHRQ]: Thanks for that question. Another typed in question is did I hear you say that the risk adjustment changes would have less impact on the pediatric population than the adults? Could you clarify that, Jeff, and perhaps expand on that a bit?

Jeff Geppert [Battelle]: Yes, in general, there are just fewer sort of materially important things, fewer ways in which the pediatric populations vary than in the adults. There is sort of a more limited set of conditions and comorbidities that are accounted for in those risk adjustment models to begin with.

Then given the rarity of most of the outcome measures that sort of further reduces the number of covariates that have material effects in those models, so those models become pretty parsimonious. There is a relatively small number of comorbidities that are identified in those populations.

The effect of the risk adjustment model itself is less, but still, there are a significant number of cases that are identified as being present on admission and that is incorporated into those models — and there is a lot of noise that is in those models that's addressed by some of the reliability adjustments.

There are important effects of the models on the rates that will prove their interpretability and ultimately make them more actionable, but in terms of sort of accounting for patient risk factors, that tends to be less materially important in the pediatrics than in the adults.

John Bott [AHRQ]: Thank you for that question. Operator, do we have any other verbal questions queued up?

[Operator]: No, there are none in the queue at this time.

John Bott [AHRQ]: Okay, and we went through all of the questions that were typed in. Thank you everybody for asking those questions. Now, if you come up with a question later on, you can submit it to the support line and we'll put a Q&A together from these webinars. As noted before, look for future listserv announcements that will note when additional webinars will be announced in this series. We'll do our best to announce that a fair amount of time in advance, and thank you for joining today.

[WEBINAR CONCLUDES]